Stewards of the Lower Susquehanna, Inc.
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November 8, 2010

The Honorable Lisa P. Jackson
Administrator
U. S. Environmental Protection Agency
Water Docket, Mailcode: 28221T
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Chesapeake Bay TMDL -- Docket no. EPA-R03-OW-2010-0736

Dear Administrator Jackson,

The Lower Susquehanna Riverkeeper, representing the members of Stewards of the Lower Susquehanna, has signed on to additional comments regarding the Pennsylvania WIP submitted by the York County, PA TMDL workgroup to DEP and cc'd to EPA. Our comments to the EPA's TMDL are dedicated to the use of Nutrient Trading as a tool for reducing pollutants, and as a tool to allow for continued population growth and development within the Chesapeake watershed.

The Clean Water Act and other laws protecting our environment were enacted for the purpose of creating a sustainable society for ALL future generations. In the Clean Water Act we find a mandate to reduce loads until ALL waters are Fishable, Swimmable, and Drinkable. A Nutrient Trading program that is not based on thorough monitoring and verification, does not contain a long-term easement-like trading system, or increases quantities of substances that are currently unregulated but are known or suspected carcinogens and endocrine disruptors, will inevitably fall short of the goals of nutrient reduction, and sustainable waterways and communities. From what we have seen so far, we cannot endorse Nutrient Trading. Here are our concerns.

Unlike existing air quality trading programs that relate easily measured discharges from one smokestack to another, Non-Point to Point Source trading occurs between a model estimate and a measured discharge. A recent report from UMCES points out the "uncertainty associated with reducing nutrients through best management practices."

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Perspectives from the University of Maryland Center for Environmental Science on the Draft Reports Addressing Key Challenges to Chesapeake Bay Protection and Restoration 9/23/2009

Market Approaches Must Yield Quantifiable Benefits. Markets are a popular idea for cost-effectively achieving environmental benefits, but they require appropriate regulatory caps (e.g., nutrient and sediment caps, impervious surface caps) and accurate quantification of the benefits (e.g. reductions in sources) achieved. The latter requirement poses great challenges for markets that would allow non-point sources to trade with point sources because of the high levels of uncertainty associated with reducing nutrients through best management practices. Market systems should be promoted in which buyers pay for results and not just the implementation of a practice. This requires more rigorous assessment of BMP performance.

A recent USGS report and subsequent news articles suggest that agricultural BMP's may not be as effective as predicted. The Agricultural Industry on the eastern shore of Maryland would have us believe that they have already implemented programs to reduce runoff, yet actual sampling suggests that their efforts have not been successful.

Chesapeake Bay progress uneven, study shows
Data suggest sewage upgrades working, farm runoff controls aren't
By Timothy B. Wheeler, The Baltimore Sun September 15, 2010

A new study shows some Chesapeake Bay rivers have gotten cleaner over the past three decades, while others are getting worse.

The analysis, released Wednesday by the U.S. Geological Survey, suggests costly upgrades of sewage plants have helped, scientists say, but it raises questions about the effectiveness of efforts to date to curb polluted runoff, particularly from farms on Maryland's Eastern Shore.

"We're going in the wrong direction in some places, and the right direction in others," said William Dennison, vice president for science applications of the University of Maryland Center for Environmental Science. He called the USGS analysis a breakthrough in tracking where the 27-year-old bay restoration effort is making progress — and where it's falling short.

Nutrient Trading does not just trade N's and P's, but trades solutions, wastewater treatment plant effluent and agricultural runoff, that contain complex mixtures of metals, hormones, anti-biotics, pharmaceuticals, industrial and medical wastes, etc. We have found no analysis of these additional pollutants. We find significant difference in the makeup of the solutions, but have no understanding of the costs/benefits of trading wastewater mixtures for agricultural mixtures, or for suburban or urban stormwater mixtures.

Some of the differences that must be looked at further are flow rates, seasonality, and local ("hotspot") impacts. WWTP effluent releases occur daily at a relatively constant rate. Agricultural Run Off is usually produced only during precipitation or freeze/thaw streambank erosion.

Agricultural Run Off is seasonal and annual trends vary, allowing for periods of healing (as has been occurring in the Bay in the recent low precipitation years). WWTP effluent contains tens of thousands of chemicals that are not tested for, including endocrine disruptors and anti-bacterials. Agricultural Run Off also contains other bioactive chemicals such as hormones, antibiotics, and herbicides. Which is worse? Constant loads or variable? Local concentrations or broad non-point input? The unevaluated mixture of chemicals in WWTP effluent and sludge, or the unevaluated mixture in various manures? And how will this impact individual waterways? We do not feel that these questions have been satisfied, and would request that they be satisfied before endorsement or creation of a Nutrient Trading program.

While concerns regarding the financial burden of upgrading aging WWTP's is understood, trading to put off these upgrades begs the question: How long until Point Sources have to upgrade? This plan to put off upgrades seems to miss two points, one regulatory and one economic. The NPDES Program is designed to ratchet down on pollution discharges by requiring 5-year assessments of treatment efficiency based on Best Available Technology. This is our mechanism to eventually reach zero discharge. Are we abandoning BAT for "low-hanging fruit"? And the economic question: If there is a deadline for WWTP upgrades (which we haven't seen), the best bet for financing appears to be (with any luck in the economy) sooner rather than later.

New Point Sources are our next concern. In the current Pennsylvania program, there is very little assurance that new sources will be able to fulfill their required commitment to provide for credits "for the life of the project". Here are the relevant references for PA's plan to accommodate development.

Pennsylvania's Chesapeake Bay Tributary Strategy
Implementation Plan for Sewage Facilities Planning

II. New Discharges and Facility Expansions

Where credits are purchased for new land development projects that result in new discharges or facility expansions, a ***developer or municipality must commit in writing***, as part of the sewage facilities planning process, ***to purchase nutrient credits sufficient to offset nutrient loads from the project.***

If the purchase of credits is necessary to maintain the zero net increase of nutrients, then the assurance must provide for those credits for the duration of the design life of the project.

PA Draft WIP Section 6. (page 50)

Guidance Document Number 392-0900-001: ***Final Trading of Nutrient and Sediment Regulation Credits – Policy and Guidelines***

The Department will expect to see assurances in the proposal that the credits will be provided to assure the long-term compliance for the treatment facility to meet the regulations in Chapter 71, Section 71.72.

For instance, a formal agreement between the municipality and the developer/permittee that establishes the developer/permittee's responsibility for operating and maintaining the system by providing credits, and the responsibility of the municipality or local agency for oversight of the system, would normally be an acceptable assurance.

Long-Term Availability of Credit is required to make such assurances. No commitments to credit availability have been made by any Department of Agriculture or Farm Bureau as to the "perpetual" availability of credits, as would be needed by a new source.

The demand for credits could come from a broad spectrum of users: existing WWTP's, expanding WWTP's, new WWTP's and POTW's, Municipal Stormwater MS4's, new development stormwater offsets, new industrial sources, electric utilities, and others. The agricultural community is being looked at as the major source for these credits, but again, no commitment of credit availability has been made. Availability of credits will be tied to crop prices and real estate markets. Shifts in the economy such as the recent ethanol rush could take "credited" lands out of the program to be replaced with cash crops. Assurances based on long term availability of credits are questionable, at best.

An additional concern is the long-term impact of new development to the availability of credits, as much of the development occurs on former agricultural lands. We currently count on our agricultural lands to process much of our WWTP sludge, as well as most of our animal waste. As development grows, the sludge burden grows. At the same time, the amount of available cropland decreases due to development. Animal production has not decreased, so the ever-declining amount of land is expected to process our "organic" wastes? In addition to the environmental concerns, the economics of trading in this fashion could greatly increase the cost of credits. As available agricultural land is reduced, the availability of credits, or supply, is reduced, driving the price up.

This leads us back to the "assurances" given by developers. Consider this scenario. A new neighborhood links into an expanding WWTP. The new users are charged based on Credit Price. This price goes up substantially as demand increases. Fifteen years from now the neighborhood association that has inherited these payments revolts at the prices and the residents contact their politicians. The politicians are outraged at the price of credits, and they change credit requirements. Now, hundreds of new neighborhoods pollute without offsets. This is our concern for the future. PERPETUAL easements are the only way to assure credit availability.

Different agricultural BMP's have different effects on our waterways. Proper buffers will reduce nutrients, sediment and pesticides. Manure export addresses nutrients but NOT endocrine disrupting herbicides. These variations need to be taken into consideration when making trades. Trading wastewater treatment plant effluent for manure exportation credits may reduce nutrients, but add substantially to the "emerging contaminant" concentrations.

Manure exportation to neighboring watersheds is not a sustainable strategy. Currently 1.2 million pounds/credits of Nitrogen are immediately available "Contingent on Sale Project that has been certified but the project will only be installed if the credits are purchased" *PA DEP Credit Registry. Much of this manure will be spread in the Delaware and Allegheny/Ohio watersheds. This practice could explode with passage of Interstate Nutrient Trading, causing loads to those waterways to increase.

Manure exportation leads us to another concern. Will it be legal to export manure for credit, and fertilize with sludge for cash? We have found nothing in the existing programs that would prevent this if agricultural operations were inclined to do this.

Another environmental consideration must be made for recent research by USGS suggesting that wetland expansion in Phosphorus saturated soils will increase release of available Phosphorus, the Dissolved Inorganic Phosphorus (DIP). DIP is the phosphorus immediately available to the Cladophora algae blooms that are choking the Susquehanna River. USGS has shown substantial increases in the DIP levels since 1985, while PA DEP claims Phosphorus reductions. Wetland expansion in the lower Susquehanna must be evaluated for Phosphorus saturation before it is encouraged or credited.

We have additional concerns regarding Verification and Accountability. DEP, MDE, and DEQ are currently all grossly deficient in transparency and/or enforcement. Maryland continues to deny Waterkeepers the Nutrient Management Plans that were ordered to be released by the court. The MD Farm Bureau fights transparency for NMPs, claiming it would destroy the Maryland agricultural economy (note: PA NMP's are available at DEP or County Conservation Districts.) Even in PA, the brokers hide the actual client's identity. Why should the public expect that the Nutrient Trading program will be transparent?

We continue to have concerns with the Verification and Accountability of agricultural credits. While a great deal of science has gone into predicting the removal efficiencies of different practices, the upkeep of these practices, and run off event variability still produce potential for broad inaccuracies in the modeling. Pennsylvania's program, which DEP claims will remain the same, has no individual farm or in-stream verification. To our knowledge, no funding has been committed by states for the needed increased staff requirements. Some suggest that verification will be done by Third Parties. These Third Party Verifiers are yet to be named. A Third Party Verifier system must NOT include brokers, as the Chicago Carbon Exchange does. This includes other parties that have "sector interests," such as the Farm Bureaus or industry organizations. Allowing verification to be done by interested parties, particularly brokers, is far too similar to the temptations of the mortgage crisis. Profit will be based on numbers of transactions, while verification is extra work without profit. Disinterested parties, possibly governmental, must be found to perform annual verification.

Proponents of Nutrient Trading assure us that the Clean Water Act has powerful tools for citizen oversight of trading. Government agencies and environmental non-profits can't keep up with the work that needs to be done now, let alone having an additional convoluted system of trades to verify.

IF these entities are expected to help in this endeavor, Transparency must be developed. Interstate Nutrient Trading will create complex webs of transactions for credits that may be spread across six states and 64,000 square miles of the Chesapeake.

Environmental Justice issues are a concern when considering Nutrient Trading programs. Communities with available funds will be able to purchase credits more readily, and they could buy more credits at higher prices, allowing continued pollution. Poorer communities, that may actually need credits to put off upgrades until funds can be procured, are at a disadvantage.

In a program where credit prices are being determined by annual auction, as in Pennsylvania's program, there is great uncertainty in the cost to the municipal or homeowners' association budget. As demand for credits increases and the cost per credit increases, poorer communities will pay a higher percentage of total community income, creating a greater burden on poorer communities.

Our final comment regarding Nutrient Trading has to do with its effect on Innovation. Innovation is spurred by demand. Trading puts off demand. A technology invented that will reduce nutrient loads at 40% of today's cost will still not be competitive with agricultural credits that will be abundant for the first years of the program. Cost-effective technologies are being tested and put in place. The Ostara direct phosphorus removal system has been put in place at two Chesapeake watershed WWTP's, in York, PA and in Suffolk, VA. With experts predicting a "phosphorus peak" within 40 years, technology to save phosphorus needs to be put in place. Currently 10% of all mined phosphorus is passing through WWTP's. This needs to be recovered.

There are Alternatives to Nutrient Trading. EPA's Backstop TMDL is already designed to put pressure on the states to reduce non-point sources. The threat of the TMDL to reduce loads from WWTP's to Best Available Technology will encourage WWTP's to fund BMP's, without providing credits to increase pollution. This could be done on subwatershed levels where the *actual* reductions could be monitored and documented.

The Clean Water Act NPDES program was designed to combine funding with required technological improvements. Funding is currently available at record-low interest rates. This is the perfect financial market to be taking out bonds for municipal WWTP upgrades.

Thank you for considering these comments as you prepare this historic plan to reclaim the Chesapeake Bay from the brink of disaster.

From the Mighty Susquehanna,

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